

BlueCar

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Introduction



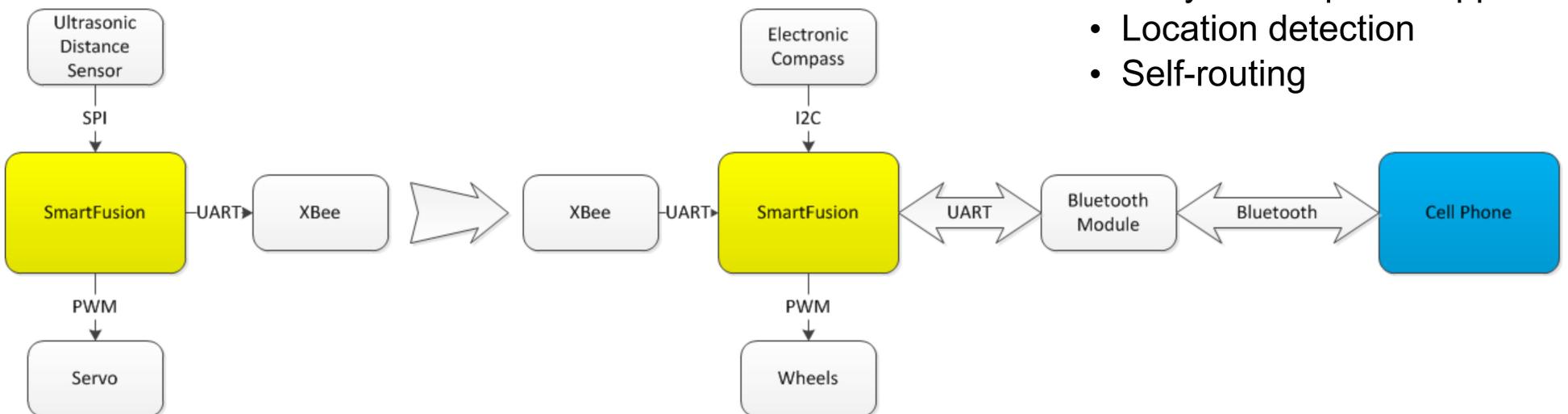
For most radio control car, we need to use special controller with limited functions. Why not achieving more useful functions using our phone?



Problem Description: Most radio cars need special controller with limited functions

- Normal radio cars can only be controlled using special controller
- It is impossible to know the position from the controller side
- Radio cars cannot do self-routing or go with certain patterns
- The controlling system is not user-friendly
- Traditional radio controller is power consuming

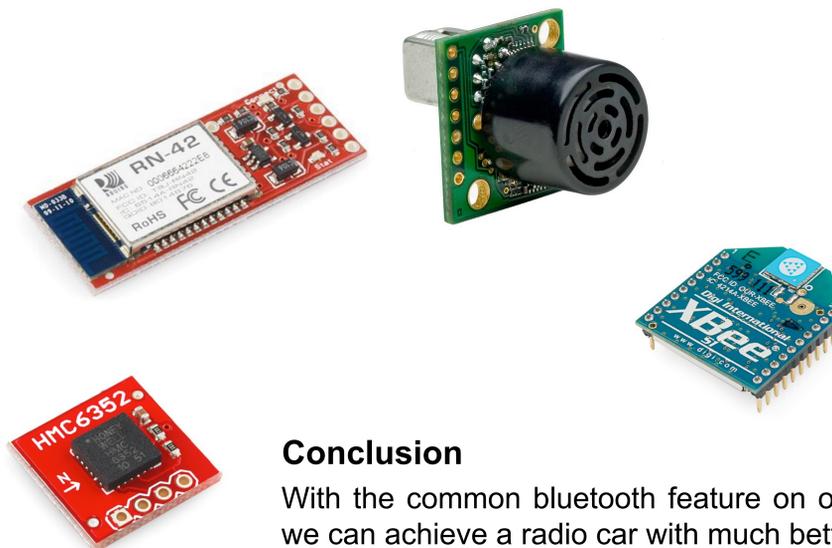
Proposed Solution: Use cell phone to monitor the position and control a car



- Easy-to-use phone app
- Location detection
- Self-routing

Communication & Sensors

- Communication between base station and car using XBee
- Communication between phone and car using UART Bluetooth
- Location detect using UART ultrasonic distance sensor and PWM-controlled servo



- Direction detecting using I2C electric compass
- PWM control to achieve smooth turning and speed adjustment

Conclusion

With the common bluetooth feature on our phone and several more components, we can achieve a radio car with much better control and more practical functions.